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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

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THE AIRCRAFT ENGINE
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ART UNIT	PAPER NUMBER
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DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/212,127

Applicant(s)

BRANDLEY ET AL

Examiner

Clayton E. LaBalle

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on 03 August 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 6, 8, 9, 11-16, 18, 21-26, 28, 29 and 31-33 is/are rejected.
- 7) ☐ Claim(s) 3, 4, 7, 10, 13, 14, 17, 19, 20, 23, 24, 27 and 30 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the inverter connected between the switch and the sensor as set forth in claims 12 and 22 must be shown or the feature(s) canceled from the claim(s). Specifically, Applicant's disclosure is lacking any information about how the inverter is "electronically inserted" between the switch and the sensor. Many circuit configurations could be envisioned which would meet this limitation. Applicant's disclosure does not even show a simple line connecting the inverter and the sensor. "Electronically inserted" could also include placing the inverter in electric fields with no physical connection at all between the inverter or the sensor elements. The use of this phrase in the claim renders the language unclear. No new matter should be entered.

After consideration of Applicant's response the examiner makes the following rejections:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12-13 and 22-23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant's disclosure does not provide

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an enabling description of the inverter electronically inserted between the sensor and the switch. For further explanation see the above objection to the drawings.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 11-12, 21-22 and 31-33 are under 35 U.S.C. 103(a) as being unpatentable over Stridsberg in view of Goldman.

Stridsberg discloses an electric motor having a drive wheel (102) with permanent magnets (101) attached to it, electromagnets (110) arranged opposite the permanent magnets, a sensor (112), a switch (411,421,431,413,423,433) and a computer (451). The assembly is supported by a structure (109). The controller of Stridsberg provides an inverting function to change the switches in order to effect braking of the motor. However, Stridsberg does not disclose the electromagnets arranged generally in a plane that is substantially parallel to, but not within, the plane or planes containing the permanent magnets.

Goldman teaches that it is well known in the art to form an electric drive for a motor with electromagnets (4,5) arranged generally in a plane that is substantially parallel to, but not within, the plane or planes containing the permanent magnets (7,8). As is well known in the art, such placement of the electromagnets and permanent magnets does not effect the operation of the motor, but do allow alteration of the size of

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the motor to minimize an axial dimension of the device while maintaining the desired mechanical output from the machine.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the motor of Stridsberg such that the electromagnets arranged generally in a plane that is substantially parallel to, but not within, the plane or planes containing the permanent magnets, as disclosed by Goldman, in order to allow the size of the motor to be minimized in a desired direction

Claims 5-6, 8-9, 15-16, 18-19, 25-26 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stridsberg in view of Goldman and further in view of Wakuta ('579).

Stridsberg and Goldman disclose the electric motor essentially as claimed except for a cavity in which a heat transferring or heat absorbing material is provided along with a radiating surface.

Wakuta teaches that it is well known to provide a cavity (20) in which a heat transferring material (oil) is circulated to cool the motor windings. A radiating surface (14,15) is provided to cooperate with the cavity to remove heat from the material. Thus, the motor is efficiently cooled.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided, in the motor of Stridsberg and Goldman, a cavity with a heat transferring or absorbing material therein in communication with the electric motor in order to cool the electric motor, as shown by Wakuta. It would have been further

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obvious to have provided a radiating surface, as disclosed by Wakuta, to remove heat from the material. Whereby the electric motor will be efficiently cooled.

Wakuta discloses several cavities (1,2,3 and 20) which contain a heat absorbing material.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stridsberg in view of Goldman and further in view of Lutz.

Stridsberg and Goldman disclose the electric motor essentially as claimed except for providing input from the user to program the controller and inverter between the sensor and the switches.

Lutz teaches that it is well known to allow user input to a computer controlled electric motor system in order to program the computer with the desired operation of the system, see figure 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have allowed user input to the controller of Stridsberg and Goldman in order to select the desired operating characteristics of the system, as shown by Lutz.

Applicant's arguments with respect to claims 1-2, 5-6, 8-9, 11-16, 18, 21-26, 28-29 and 31-33 have been considered but are moot in view of the new ground(s) of rejection.

Claims 3-4, 7, 10, 13-14, 17, 19, 20, 23-24, 27 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

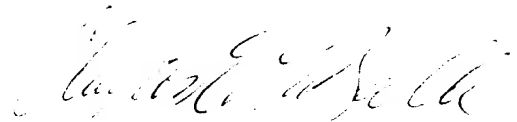
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clayton E. LaBalle whose telephone number is (703) 308-0519. The examiner can normally be reached on Monday-Thursday from 6:30 AM-4:00 PM EST and every other Friday from 6:30 AM-3:00 PM EST. The above number is equipped with voice mail. The examiner can also be reached via E-mail at Clayton.Laballe@uspto.gov to schedule an interview.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez, can be reached on (703) 308-1371. The fax phone number for Technology Center 2800 is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)308-0956.



Clayton E. LaBalle
Primary Examiner
Art Unit 2834
October 06, 2000